

### Abstract of the Disclosure

An inspection device of a burner used for the synthesis of an optical fiber base material of the present invention precisely measures the sizes of tip portions of a burner used for core formation, and a burner used for clad formation. The inspection device of the invention has an XY table, a background illuminating portion, and a microscope. The burners are placed on the XY table. The background illuminating portion, which projects an image of the tip of the burner, radiates light from the rear side and is directed to the burner. The image projected by the light that passed through the hollow portion of the tube is brighter compared to the one that has passed through the walls of the tube, thus projecting an image of the cross-section of the tip of the burner. A plane mirror portion reflects this image on a microscope side, and the microscope receives this image. An operator contemplates the image received by this microscope so that the sizes of the burners can be measured. By just (merely) viewing the tip of the glass burner, the contour of the tip tends to be undecipherable. By using the machine, of the burner tip portion becomes clearer enabling us to precisely measure the size of the burner's tip portion by means of this non-contact type device.